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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------|------------------|
| 10/519,446 | 12/29/2004 | Wolfgang Rebholz | ZAHFRI P706US | 9721 |
| 20210 | 7590 | 06/13/2006 | EXAMINER | |
| DAVIS & BUJOLD, P.L.L.C. FOURTH FLOOR 500 N. COMMERCIAL STREET MANCHESTER, NH 03101-1151 | | | LORENCE, RICHARD M | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 3681 | |

DATE MAILED: 06/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|---------------------------------------|--|--|
| Office Action Summary | Application No. 10/519,446 | Applicant(s) REBHOLZ, WOLFGANG | |
| | Examiner Richard M. Lorence | Art Unit 3681 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 December 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 12-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 12-15, 17-19 and 21 is/are rejected.
- 7) ☒ Claim(s) 16 and 20 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 December 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>12/29/04</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This is the first Office action on the merits of Application No. 10/519,446 filed on December 29, 2004. Claims 12-21 are currently pending.

Priority

Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). The certified copy has been filed in parent Application No. PCT/EP03/06735, filed on June 26, 2003.

Information Disclosure Statement

The information disclosure statement (IDS) submitted on December 29, 2004 has been considered by the examiner.

Specification

The disclosure is objected to because of the following informalities:

The last three lines of paragraph 38 are believed to be incorrect regarding the splines on the plate 13. Figure 3 appears to show the plate 13 having interior splines which engage the same splines on the shaft 1 as the hub 7.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

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The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 21 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 21 recites the limitations "the respective friction surfaces" and "the disk elements" in line 2. There is insufficient antecedent basis for these limitations in the claim.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 12, 13 and 17-19 are rejected under 35 U.S.C. 102(b) as being anticipated by US 4,603,596 A (Akashi et al.).

Akashi et al. discloses a transmission shift system including a synchronizer 16 for the idler wheels 11, 13 including a hydraulically actuated sliding sleeve 16f mounted non-rotatably and axially displaceable on shaft 10 via hub 16a. Note Figure 4 and column 20, line 36 to column 21, line 39 regarding the control of the hydraulic pressure during the shifting operation as in claims 12 and 13. Akashi et al. further shows the piston 71 connected to an oil supply system shown in Figure 3 as in claim 17; return spring 74 or 75 as in claim 18; and brake plate 16d or 16e as in claim 19.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 14 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 4,603,596 A (Akashi et al.) in view of US 1,973,807 A (Grinham et al.).

Akashi et al. does not disclose the catch device set forth in claims 14 and 15. Grinham et al. discloses a transmission shift system including a synchronizer with a catch device comprising a ball spring unit including a ball 28 guided in a bore in a hub 25 which can be guided into a catch groove 29 in a sliding sleeve 12 by a spring. Grinham et al. suggests that such an arrangement causes the members 26, 27 to reach synchronization prior to the engagement of the positive dog teeth 16, 17. As such this ball spring unit performs the equivalent function as the cone member 16b and synchronizer ring 16d in Akashi et al. It would have been obvious to one having ordinary skill in the art at the time the invention was made to employ a ball spring unit as the blocking member in the shift system of Akashi et al. in lieu of the friction cone and synchronizer ring since the two arrangements were known to be equivalent means for blocking engagement of the positive clutch elements prior to synchronization.

Claims 21 as best understood is rejected under 35 U.S.C. 103(a) as being unpatentable over US 4,603,596 A (Akashi et al.) in view of US 5,337,872 A (Kawamura et al.).

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Akashi et al. does not disclose the coating of the friction surfaces of the synchronizer. Kawamura et al. teaches coating the friction surfaces of a synchronizer in order to improve the frictional characteristics, resist abrasion and eliminate the need for grinding or cutting (column 2, lines 19-28). It would have been obvious to one having ordinary skill in the art at the time the invention was made to coat the friction surfaces of the synchronizer of Akashi et al. in order to realize the benefits suggested by Kawamura et al.

Allowable Subject Matter

Claims 16 and 20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US 2,092,580 (Kelley), US 4,069,8063 A (Cataldo) and US 6,250,446 B1 (Leite) each show synchronizers with hydraulic actuation.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Richard M. Lorence whose telephone number is (571) 272-7094. The examiner can normally be reached on Mondays through Fridays from 10:30AM to 7:00PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles A. Marmor can be reached on (571) 272-7095. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Richard M. Lorence
Primary Examiner
Art Unit 3681

rml